October 12, 2011

Mr. Michael Berkoff
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: **Excavation Oversight at the 4800 Block of Kennedy Avenue in East Chicago, IN**
U.S. Smelter and Lead Refinery (USS Lead) Superfund Site
East Chicago, Lake County, Indiana
WA# 154-RICO-053J

Dear Mr. Berkoff:

At your request, SulTRAC, Inc. (SulTRAC) has prepared this letter to document the excavation oversight activities conducted on October 6, 2011, at the 4800 block of Kennedy Avenue in East Chicago, IN. The City of East Chicago is repairing a portion of the sewer in the middle of Kennedy Avenue. Because the location is within the USS Lead Superfund Site, the U.S. Environmental Protection Agency (EPA) was contacted about appropriate disposition of soils removed from the excavation. SulTRAC was contracted to verify that any contaminated material be segregated from the native soils and disposed of in a proper manner. Real-time concentrations of lead and arsenic were recorded with an X-ray fluorescence (XRF) analyzer to determine if waste profiling and disposal of the soils would be necessary.

SulTRAC arrived at the excavation area after the concrete had been cut and the soils under the 1.5- to 2-foot-thick concrete/asphalt surface had been exposed. The area of excavation was approximately 29 feet by 11.5 feet, in the middle of the turning lane of Kennedy Avenue. SulTRAC procured an XRF analyzer (InnovXsystems, Olympus Delta Standard model) to characterize lead and arsenic concentrations in any fill present within the excavation. The concrete pavement lay directly upon medium brown/brownish-orange native sand, and fill material was not observed by the SulTRAC employee onsite.

SulTRAC collected four samples of the native sand to confirm with the XRF that the soil was not impacted with lead or arsenic. Two readings were recorded for each sample collected. The soil was removed from the excavation with the excavator and placed in a resealable plastic bag with a trowel. Each sample was homogenized prior to being screened with the XRF analyzer. The calibration on the XRF analyzer was checked prior to screening the soil samples. Table 1 below presents the results of the XRF screening; photographs of the excavation are provided in Attachment A.

Table 1: XRF results from the Kennedy Avenue excavation

Sample ID	Sample Location	Lead concentration (ppm)	Arsenic concentration (ppm)
Sample #1	Northeast corner of excavation	13 ± 2	ND < 4.5
		17 ± 2	ND < 4.5
Sample #2	East edge of excavation in the middle	21 ± 2	10.3 ± 1.9
		18 ± 3	ND < 5.5
Sample #3	West edge of excavation in the middle	8 ± 2	10.1 ± 1.9
		32 ± 3	ND < 5.8
Sample #4	Southwest corner of excavation	16 ± 2	6.0 ± 1.6
		20 ± 3	ND < 5.6

Notes:
ppm parts per million

The samples were all well below the action limits of 700 parts per million (ppm) for lead and 12 ppm for arsenic. The soils did not need to be segregated or staged for waste profiling or disposal, and SulTRAC instructed the on-site contractors that the materials could be returned to the excavation or disposed of as normal excavated soils.

The contractor excavated a test pit to a depth of 7 feet below ground surface (bgs) to confirm that fill material was not present beneath the sand and to see whether the water table could be identified. The test pit confirmed that there was no fill material and the water table was not identified to a depth of 7 feet.

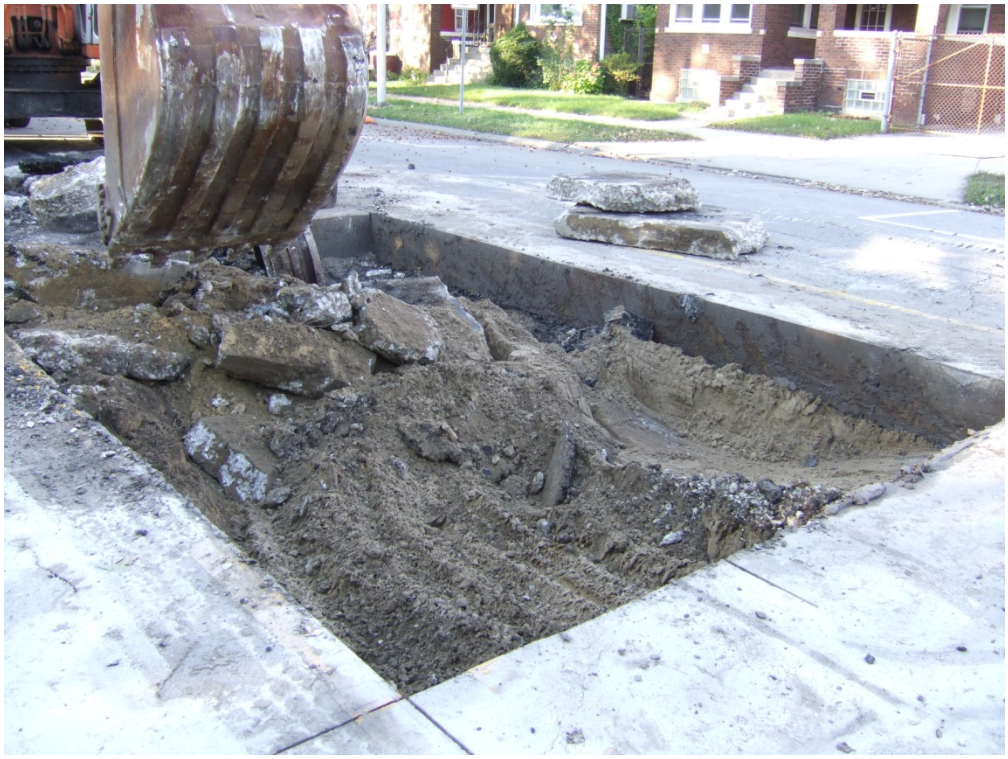
If you have any questions regarding this letter, you may call me at (312) 443-0550, ext. 17.

Sincerely,

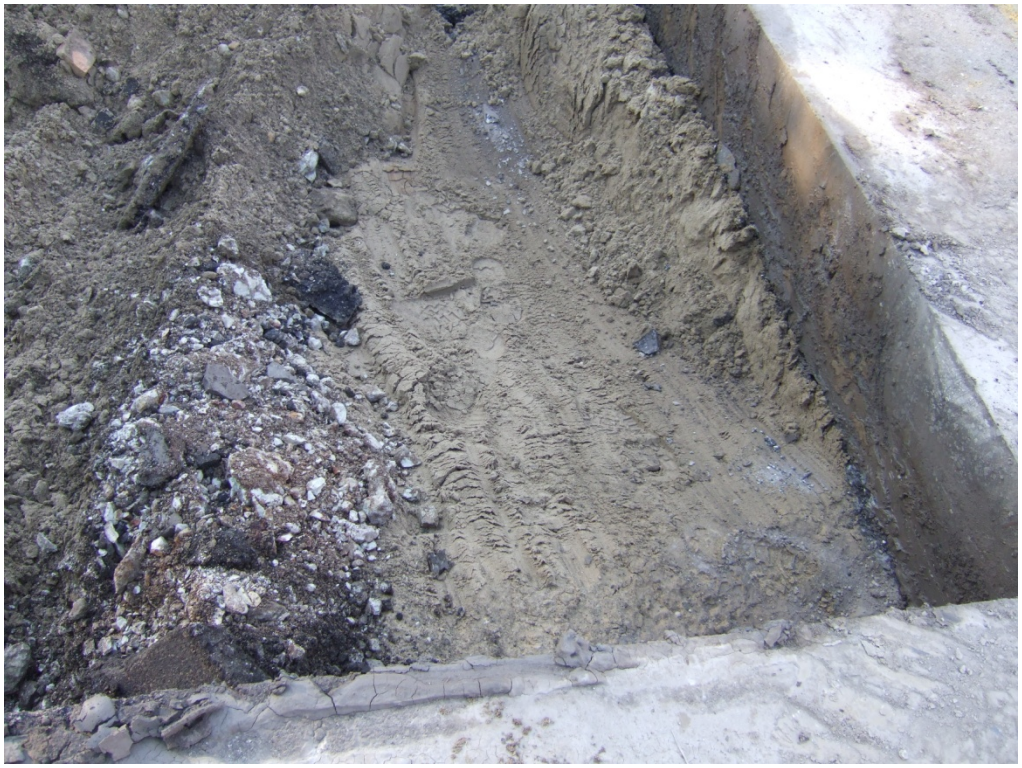
Cheryl Gorman
Environmental Geologist

cc: Parveen Vij, EPA Contracting Officer
Mindy Gould, SulTRAC Program Manager
Rik Lantz, Project Manager

Attachment A
Photographs of Excavation

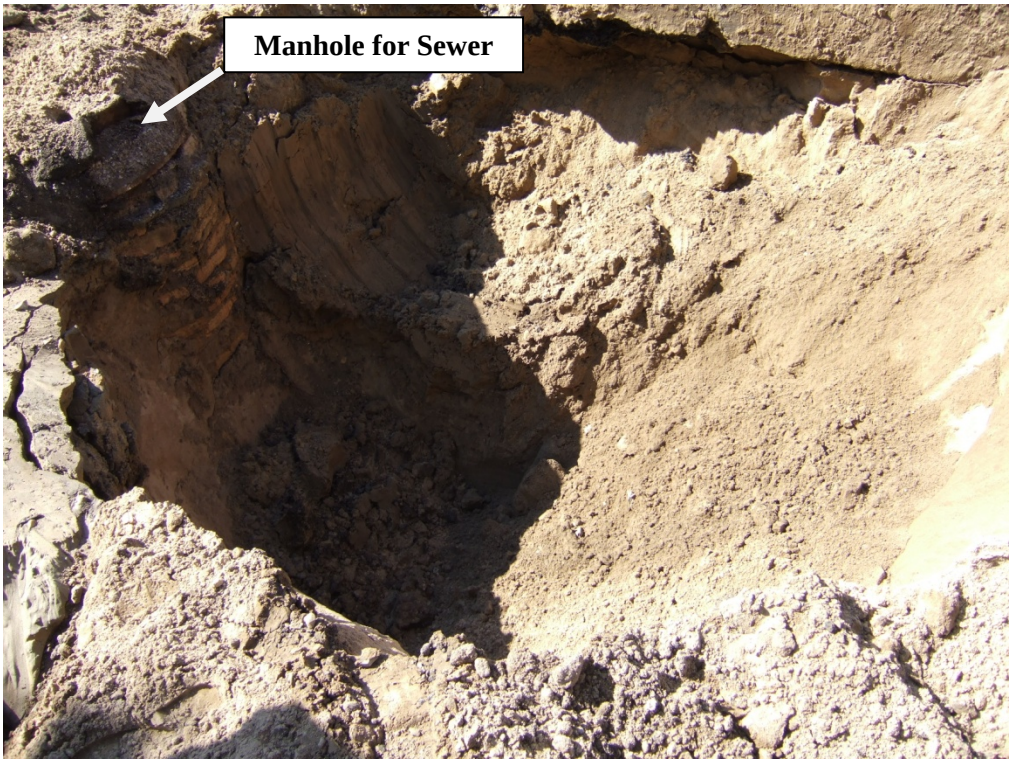


Photograph 1: Area of Excavation (11.5’ x 29’)



Photograph 2: Close-up of soils in excavation (sand)

Photograph 3: Sample #4 collected for XRF screening.



Photograph 4: Deeper soils in excavation, approximately 7 feet below the top of pavement.